

1 **ABSTRACT**

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3 A sputtered silicon layer and a low temperature fabrication  
4 method thereof, is introduced. The sputtered silicon layer,  
5 , is sputtered with predetermined sputtering criteria a  
6 predetermined pre-annealing configuration. The sputtering  
7 criteria include sputtering power, ambient sputtering  
8 pressure, choice of sacrificial layer and etchant. The  
9 initially sputtered layer is transformed during a low  
10 temperature annealing process into a post-annealing state.  
11 A released structure is micro-machined from the sputtered  
12 layer in its post-annealed state. The low temperature  
13 annealing leaves pre-fabricated integrated aluminum-  
14 metalized circuitry unaffected. Optional conductive  
15 sputtered co-layers reduce resistivity and may be used to  
16 further tune strain and strain gradient.

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